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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/989,865	11/19/2001	Fumihiko Saito	FUJR19.184	2331

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EXAMINER

NGUYEN, SANG H

ART UNIT PAPER NUMBER

2877

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/989,865

Applicant(s)

SAITO ET AL.

Examiner

Sang H Nguyen

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-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 April 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 7-10 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Applicant's election of Group I (claims 1-5 and 7-10) filed on 04/18/03 in Paper No.6 without traverse.

Applicant is required to cancel the none-elected claim 6.

Information Disclosure Statement

2. This office acknowledges of the following items from the Applicant: Information Disclosure Statement (IDS) file on 11/19/01 is received and made of record as Paper # 3. The references cited on the PTOL 1449 form have been considered.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Tachikawa (U.S. Patent No. 5,329,359).

Regarding claims 1 and 7; Tachikawa discloses a mounting information collecting device and method, comprising:

* a laser beam source (2 of figure 1) is considered to be a light emitting means for emitting an optical signal to mounted statuses/parts (15 of figure 1) of circuit boards (6 of figure 1);

* optical signal processing means is considered to be a stage (13 of figure 1) is connected to a computer (11 of figure 1) for applying and processing to the optical signal to each of the circuit boards (6 of figure 1) to generate a processed optical signal to a motor driver (12 of figure 1) and the computer (11 of figure 1); and

* mounting information collecting means is considered to be a high photodiode (8,9 of figure 1) for receiving the processed optical signal/reflected laser beam from mounted parts (15 of figure 1) of the circuit boards (6 of figure 1) and detect/measure whether or not the processing has been applied to collect the mounting information parts of the circuit boards (col.3 lines 50-60 and col.6 lines 60-68, and figures 3A-3B, 5, and 9A-9B). See figures 1-12.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 2-5 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachikawa (U.S. Patent No. 5,329,359) in view of Tsuda et al (U.S. Patent No. 6,005,965).

Regarding claims 2-5 and 8-10; Tachikawa discloses all of features in claimed invention except for a first optical filter for passing all wavelengths of the optical signal and a second filter for removing a particular wavelength specifically associated with a corresponding one of the circuit board by a controllable optical filter. However, Tsuda et al teaches that it is known in the art to provide a control unit connected to a first camera (A of figure 1) having a first optical filter (7 of figure 1) and a second camera (B of figure 1) having a second optical filter (9 of figure 1), wherein the first optical filter (7 of figure 1) for passing all wavelengths of the optical

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signal/green light and the second filter (9 of figure 1) for removing a particular wavelength specifically associated with a corresponding one of the circuit board/BGA (1 of figure 1). It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify mounting information collecting device and method of Tachikawa with a first filter and a second filter by a controllable optical filter as shown in the device and method of Tsuda et al for the purpose of filtering and reducing optical signal wavelengths.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Farnworth et al (6,514,787) discloses opto-electric mounting apparatus; Minamitani et al (6,506,222) discloses method and apparatus for mounting component; Seto (6,199,272) discloses electronic component mounting apparatus and component feeding device; Shirakawa (6,176,011) discloses electronic parts supplying device and electronic parts mounting method; Tsujikawa et al (5,991,435) discloses inspecting apparatus of mounting state of component in mounting line of electronic component; Onitsuka (5,501,005) discloses mounting device of electronic component and a mounting method; Suzuki(5,761,798) discloses system and a method for mounting electronic component; or Iwatsuka et al (5,383,270) discloses method for mounting component chips and apparatus therefor.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Sang Nguyen whose telephone number (703)308-6426. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

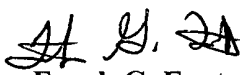
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Frank Font, can be reached on (703)308-4881. The fax phone number for the organization where this application or proceeding is assigned is (703)308-7722 or 7724.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.



Nguyen/ sn

April 29, 2003



Frank G. Font
Supervisory Patent Examiner
Art Unit 2877
Technology Center 2800